

Abstract

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Title: The influence of hygiene standards on the onset of allergies

Diploma work

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Background: The aim of this work is to find out the influence of individual hygiene standards on the onset of allergy of children. Our work is based on a so called hygiene hypothesis, which explains that the immunity system of children is not stimulated sufficiently, if households sterilize excessively, and therefore there is the superiority of Th2 lymphocytes and an increased level of eosinophils and IgE antibodies in the atopic's blood contrary to the blood of a healthy child.

Methods: We have obtained information using a form of questionnaire, which was directed to parents of twelve-year old children. 2 793 questionnaires were sent to sixty-nine elementary schools in all of the Czech Republic. We received 1 697 filled-out questionnaires in total. 420 children were defined evidently allergic and 774 non-allergic. Then we have processed those data subsequently.

Results: The influence of washing habits and cosmetics according to our questionnaire is not too significant. The most significant influence on allergy is evident in the case of a duvet chosen for children. Contrary to feather duvet, synthetic duvets determine the onset of allergy in children. Neither the frequency of bedding change nor the use of fabric softeners has considerable influence on causing allergy. On the contrary we have found that in more households of non-allergic children beddings are washed at 40°C. More non-allergic children also live in households with carpets. This is probably because the parents of allergic children removed the carpets in their households.

The use of disinfectants was found to have a negative effect. More non – allergic children were found in the homes where the floors were washed by a

standard way (water with soap). Frequent hovering seems to be influencing the rate of allergy in the households. No considerable effect was found in the use of different forms of airing or different types of heating systems in the children's bedrooms.

Conclusions: On the basis of this work we can recommend the use of feather duvets because this type of duvet has the highest influence on the onset of allergy in children. From our point of view washing the floor should be done with the use of soap detergent without any disinfectant. If there are carpets in the household, frequent hovering is not suitable. Frequent hovering would have negative influence on the onset of allergy. However, this issue is still not closed and more investigation is required.